



Field border
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Part I. Planning and Design Considerations

Applicability of Practice

Field borders can be created along field boundaries, ditch or waterway banks, terraces, contour strips, or pipeline areas. Frequent disturbance, such as vehicle traffic, turning farm equipment, mowing, or other farm activities, may limit the value of field borders for wildlife. Nonetheless, in Midwestern agricultural landscapes, field borders can provide a protective buffer between cultivated farmland and sensitive upland or aquatic habitats adjacent to farm fields. Undisturbed or infrequently disturbed field borders potentially provide habitat for feeding, nesting, and resting wildlife. Field borders also may serve as travel corridors that allow animals to move safely between habitats.

Site Considerations

- Landowner objectives (types of wildlife, intended use of the field border)
- Proximity to available water
- Adjacent cropland (irrigated or non-irrigated; type of crop)
- Soil qualities (texture, depth, moisture content)
- Connectivity to other wildlife habitats
- Plant hardiness zones
- Width and length of field border and ability to accommodate desired wildlife species
- Special wildlife needs (e.g., threatened or endangered species)

Design Considerations

Fish and wildlife design considerations in Midwestern agricultural landscapes include (1) frequency, timing, and nature of disturbance; (2) buffer width and length; (3) food value of plants; (4) plant selection to create diverse vertical and horizontal structure; (5) adjacent land uses; and (6) opportunities to link other wildlife habitats. If disturbance is frequent and pervasive, then opportunities to manage field borders for wildlife are greatly limited. Attention, therefore, should focus on those situations where disturbance is infrequent. As is true for all linear or strip habitats (e.g., fencerows, roadsides, or other buffer practices such



Eastern cottontail

as filter strips, windbreaks-shelterbelts, riparian forest buffers), wider buffers with mixtures of different plant types (e.g., grass and forb) will attract more species of wildlife than narrow buffers comprised of a single species. If the goal is to provide wildlife with secure travel corridors and year-round cover, then mixes of

native grasses and forbs should be emphasized over introduced or cultivated species such as brome grass and alfalfa. Introduced plants generally do not stand up to adverse weather as well as natives, so their value as winter cover is reduced relative to native plantings. Nonetheless, mixes of wildlife-friendly introduced grasses and forbs may provide excellent nesting and brood-rearing cover for ground-nesting birds if stands are properly maintained. Note that aggressive introduced plants such as reed canarygrass and tall fescue adversely affect wildlife and should always be avoided when planning for wildlife. Refer to the table in Part II for determining plant species suitable to meet the wildlife objectives. Recommended widths of field borders used as travel corridors is 50 ft (20-ft minimum) and nesting or escape cover is 100 ft (40-ft minimum).

Maintenance Considerations

The amount of maintenance required and the method used to maintain field border vegetation depends on how the area is used by the landowner, wildlife or habitat goals, and types of vegetation established in the buffer. For example, maintenance requirements for borders planted in alfalfa hay will be different from plantings of native grasses and forbs. Within the above constraints, management should seek to maintain a non-uniform vegetative structure and minimize disturbance to wildlife especially during the reproductive

period. Timing of maintenance is particularly critical if ground-nesting birds are using the field border. Disturbances necessary for maintaining vegetation or buffer function such as light disking, mowing, selective herbicide treatment, or grazing should be delayed until after August 1. Native plantings should be burned approximately every three years; treating one-third of the area each year is preferable to treating the entire area in the same year. Regarding timing of burns, fall burns eliminate winter cover, so burning in spring before the onset of nesting (May 1) is commonly recommended for resident wildlife such as ring-necked pheasant. Fall or winter burning is recommended to maintain the forb component of buffers and enhance their value for pollinators (e.g., butterflies) and young birds. **(Note: Before conducting a prescribed burn, have a qualified professional develop a prescribed burning plan for your area.)** Mowing at night causes high mortality of wildlife (adults and young) and should be avoided at all times. Maintenance schedule of field borders may need to be adjusted to take into consideration activities occurring on adjacent areas. For example, if nests of ground-nesting birds are disturbed in nearby fields (e.g., pastureland or hayland), then displaced birds may attempt to renest in field borders. Delaying treatments beyond conventional dates may be necessary to accommodate these late nesting birds.

Part II. List of Recommended Plants

Native Grasses Common Name	Scientific Name	Rooting Habit	Site Suitability ¹
Big bluestem	<i>Andropogon gerardi</i>	Bunch	D–WM
Blue joint grass	<i>Calamagrostis canadensis</i>	Sod	WM–W
Canada wildrye	<i>Elymus canadensis</i>	Bunch	DM–WM
Eastern gamagrass	<i>Tripsacum dactyloides</i>	Bunch	DM–WM
Indiangrass	<i>Sorghastrum nutans</i>	Bunch	D–WM
Little bluestem	<i>Schizachyrium scoparium</i>	Bunch	D–M
Prairie cordgrass	<i>Spartina pectinata</i>	Sod	M–W
Prairie dropseed	<i>Sporobolus heterolepis</i>	Bunch	D–W
Sideoats grama	<i>Bouteloua curtipendula</i>	Sod	D–DM
Switchgrass	<i>Panicum virgatum</i>	Sod	D–WM
Virginia wildrye	<i>Elymus virginicus</i>	Bunch	WM–W
Western wheatgrass	<i>Agropyron smithii</i>	Sod	DM–WM

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Part II. List of Recommended Plants (continued)

Native Forbs Common Name	Scientific Name	Site Suitability ¹
Black-eyed Susan	<i>Rudbeckia hirta</i>	D–WM
Butterfly milkweed	<i>Asclepias tuberosa</i>	DM–M
Cardinal flower	<i>Lobelia cardinalis</i>	WM–W
Common spiderwort	<i>Tradescantia ohimensis</i>	D–M
Compass plant	<i>Silphium laciniatum</i>	DM–M
Cream wild indigo	<i>Baptisia bracteata leucophaea</i>	D–M
Culver's root	<i>Veronicastrum virginicum</i>	M–W
False indigo	<i>Baptisia leucophaea</i>	DM–M
False sunflower	<i>Heliopsis helianthoides</i>	M
Gray-headed coneflower	<i>Ratibida pinnata</i>	D–WM
Great blue lobelia	<i>Lobelia siphilitica</i>	W
Hoary vervain	<i>Verbena stricta</i>	D–DM
Illinois bundleflower	<i>Desmanthus illinoensis</i>	DM–M
Illinois tick trefoil	<i>Desmodium illinoense</i>	D–M
Lead plant	<i>Amorpha canescens</i>	D–M
New England aster	<i>Aster novae-angliae</i>	M–WM
Pale beard tongue	<i>Penstemon pallidus</i>	D–DM
Pale purple coneflower	<i>Echinacea pallida</i>	M
Partridge Pea	<i>Chamaecrista fasciculata</i>	DM–M
Prairie blazing star	<i>Liatris pycnostachya</i>	DM–WM
Prairie dock	<i>Silphium terebinthinaceum</i>	M
Purple prairie clover	<i>Dalea purpureum</i>	D–M
Rattlesnake master	<i>Eryngium yuccifolium</i>	DM–M
Round-headed bush clover	<i>Lespedeza capitata</i>	D–M
Showy tick trefoil	<i>Desmodium canadense</i>	M–WM
Spotted Joe-Pye weed	<i>Eupatorium maculatum</i>	W
Stiff goldenrod	<i>Solidago rigida</i>	D–M
Swamp milkweed	<i>Asclepias incarnata</i>	W
Tall tickseed	<i>Coreopsis tripteris</i>	M–WM
White wild indigo	<i>Baptisia alba macrophylla</i>	DM–WM
White prairie clover	<i>Dalea candida</i>	DM–M
Wild bergamont bee balm	<i>Monarda fistulosa</i>	D–M
Wild quinine	<i>Parthenium integrifolium</i>	DM–WM

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Part II. List of Recommended Plants (continued)

Non-native Grasses Species

Common Name	Rooting Habit	Site Suitability ²
Smooth brome grass	Sod	D,WD
Kentucky bluegrass	Sod	WD,PD
Orchardgrass	Bunch	D,WD
Timothy	Bunch	WD,PD
Red top	Sod	WD,PD
Perennial ryegrass	Bunch	WD,PD

Non-native Legume Species

Common Name	Site Suitability ²
Alfalfa	D,WD
Red clover	D,WD
Birdsfoot trefoil	WD,PD
Ladino clover	WD,PD
Alsike clover	WD,PD
Annual lespedeza ³	D,WD

¹Site Suitability: D = Dry, DM = Dry Mesic, M = Mesic, WM = Wet Mesic, W = Wet.

²Site Suitability: D = Droughty, WD = Well Drained, PD = Poorly Drained.

³Annual lespedezas are limited to Illinois NRCS Plant Suitability Zones 2 and 3 only. Common Korean and Summit are recommended varieties of Korean lespedeza. Kobe and Marion are recommended varieties of common (striate) lespedeza.

Part III. Specifications Sheet

Use Specification Sheet provided with general Field Borders Job Sheet. Include wildlife species desired and maintenance specifications relevant to this species or assemblage of species.

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